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10/015,013	12/11/2001	Carroll Philip Gossett	PGOSS-004.US.P	2062

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06/16/2003

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EXAMINER

NGUYEN, DUNG X

ART UNIT

PAPER NUMBER

2631

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3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/015,013

Applicant(s)

GOSSETT, CARROLL PHILIP

Examiner

Dung X Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4 - 7, 10, 11, 13 - 21, and 23 - 25 is/are rejected.
- 7) ☒ Claim(s) 3,8,9,12 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1, 2, 7, 10, 11, 13, 15, 20, and 21 are rejected** under 35 U.S.C. 102(b) as being anticipated by Lee et al. (US patent # 5,822,360).

Regarding claim 1, Lee et al. discloses (figure 6):

- Input (110) for receiving spread spectrum signal;
- Digital filter (114) coupled to input (110), and is used to remove periodic signals (Removing the unwanted signals is the function of a filter) in a specified band (abstract).

Regarding claim 2, Lee et al. further discloses that the filter is linear predictive coding (column 6, lines 4 – 11).

Regarding claim 7, Lee et al. further discloses that the A/D converter (112) between input (11) and LPC filter (114).

Regarding claim 10, the linear predictive coding filter outputs a prediction error that is inherently used for signal processing purposes.

Regarding claim 11, the limitations are analyzed in the same manner set forth as claim 1.

Regarding claim 13, Lee et al. further discloses that its invention comprises a direct sequence spread spectrum system (column 9, lines 11 – 13).

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Regarding claim 15, Lee et al. further discloses that the linear prediction terms are discarded (column 11, lines 53 – 57) and error terms are inherently used for signal processing.

Regarding claim 20, Lee et al. discloses (figure 6):

- Input (110) for receiving spread spectrum signal;
- A/D converter (112) providing means for digitizing the spread spectrum signal;
- Determining linear predictive coefficients corresponding to the spread spectrum signal (column 11, lines 52 – 53);
- LPC 114 filter discarding linear predictive coefficients (column 11, lines 53 – 57);
- Determining error coefficients corresponding to the spread spectrum signal (column 11, lines 58 – 64);
- Inherent using the error coefficients in signal processing.

Regarding claim 21, Lee et al. further discloses the LPC filter 114 is used to determine the linear predictive coefficients and the error coefficients (column 11, lines 42 – 65).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 4 - 6, 14, 16 - 19, and 23 - 25 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US patent # 5,822,360).

Regarding claim 4, Lee et al. differs from the instant claimed invention that it does not state that the specified band corresponds to IEEE 802.11(b). However, Lee et al. discloses that its invention is used in direct sequence spread spectrum (column 9, lines 11 – 13), and IEEE 802.11(b) is a standard of DSSS environment (Harry Newton, "Newton's Telecom Dictionary", ISBN # 1-57820-069-5, Malt Kelsey published, page 17). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the system of Lee et al. to comply with the standard as specified in IEEE 802.11(b) since Lee et al.'s system is a DSSS communication system.

Regarding claim 5, Lee et al. differs from the instant claimed invention that it does not state that the specified band correspond to Bluetooth. However, Lee et al. discloses that its invention is used in direct sequence spread spectrum (column 9, lines 11 – 13), and Bluetooth is a standard using frequency hopping spread spectrum technique (Harry Newton, "Newton's Telecom Dictionary", ISBN # 1-57820-069-5, Malt Kelsey published, pp. 96-97). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Lee et al. to comply with the specified by Bluetooth thereby its specified band corresponding to the Bluetooth. Since both frequency hopping and direct sequence are specific forms of spread spectrum communication system. Using a frequency hopping instead of direct sequence is just an alternative way of communicating in the spread spectrum environment.

Regarding claim 6, Lee et al. differs from the instant claimed invention that it does not mention that its invention is using in CDMA receiver. However, CDMA system is a system to deal with coded signal in a spread spectrum system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use Lee et al. in the CDMA system, because CDMA system is a subset of spread spectrum with coded system (column 2, lines 46 – 64), for increasing capacity thus translating into greater revenue.

Regarding claim 14, Lee et al. differs from the instant claimed invention that it does not mention that the spread spectrum comprises a frequency hopping spread spectrum system. However, Lee et al. discloses that its invention operating in direct sequence spread spectrum

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technique (column 9, lines 11 – 13), and the frequency hopping is also a subset of spread spectrum technique. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Lee et al. to comply with frequency hopping. Since both frequency hopping and direct sequence are specific forms of spread spectrum communication system. Using a frequency hopping instead of direct sequence is just an alternative way of communicating in the spread spectrum environment.

Regarding claim 16, Lee et al. differs from the instant claimed invention that it does not state that the filter is used to filter out unwanted signals in compliance with IEEE 802.11(b). However, Lee et al. discloses that its invention is used in direct sequence spread spectrum (column 9, lines 11 – 13), and IEEE 802.11(b) is a standard of DSSS environment (Harry Newton, "Newton's Telecom Dictionary", ISBN # 1-57820-069-5, Malt Kelsey published, page 17). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the system of Lee et al. to comply with the standard as specified in IEEE 802.11(b) thereby its filter is used to filter out unwanted signals in compliance with IEEE 802.11(b), since Lee et al.'s system is a DSSS communication system.

Regarding claim 17, Lee et al. differs from the instant claimed invention that it does not mention that its filter is used to filter out the unwanted signals in compliance with Bluetooth. However, Lee et al. discloses that its invention is used in direct sequence spread spectrum (column 9, lines 11 – 13), and Bluetooth is a standard using frequency hopping spread spectrum technique (Harry Newton, "Newton's Telecom Dictionary", ISBN # 1-57820-069-5, Malt Kelsey published, pp. 96-97). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Lee et al. to comply with the specified by Bluetooth, a standard using frequency hopping spread spectrum technique, thereby its filter is used to filter out unwanted signals in compliance with the Bluetooth. Since both frequency hopping and direct sequence are specific forms of spread spectrum communication system. Using a frequency hopping instead of direct sequence is just an alternative way of communicating in the spread spectrum environment.

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Regarding claim 18 Lee et al. differ from the instant claimed invention that it does not state that the digital filter is used to filter out unwanted signals in a standard modulated CDMA system. However, CDMA system is a system to deal with coded signal in a spread spectrum system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use Lee et al. to filter out unwanted signals in the CDMA system, because CDMA system is a subset of spread spectrum with coded system (column 2, lines 46 – 64), for increasing capacity thus translating into greater revenue.

Regarding claim 19, Lee et al. differ from the instant claimed invention that it does not state that the digital filter is used in a wireless peer-to-peer system. However, peer-to-peer system is a small network, one branch of communication system (Harry Newton, “Newton’s Telecom Dictionary”, ISBN # 1-57820-069-5, Malt Kelsey published, page 523). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement Lee et al.’s digital filter into a wireless peer-to-peer system for security and reliability.

Regarding claim 23, the limitations are analyzed in the same manner set forth as claim 16.

Regarding claim 24, the limitations are analyzed in the same manner set forth as claim 17.

Regarding claim 25, the limitations are analyzed in the same manner set forth as claim 6.

Allowable Subject Matter

5. **Claims 3, 8, 9, 12, and 22 are objected** to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Documents:

Partyka (U.S. Patent No. 6,535,544 B1) discloses a frequency hopping system for intermittent transmission.

Naruse et al. (U.S. Patent No. 6,072,822) discloses a terminal unit for use with radio system and searching method.

Tiemann et al. (U.S. Patent No. 6,009,118) discloses a parallel correlator for a spread spectrum receiver.

Battin et al. (U.S. Patent No. 5,649,299) discloses an apparatus and its corresponding method for adapting a digital radiotelephone system to increased subscriber traffic.

Other Publications:

Tianren et al., "Vector Quantization Based upon Bandpass Filtering Applied to Speech Recognition", 9th International Conference on Pattern Recognition, IEEE 1998, 14-17 November 1998, vol. 2, pp. 1091-1093.

Harry Newton, "Newton's Telecom Dictionary", ISBN # 1-57820-069-5, Malt Kelsey published, pp. 96-97.

Harry Newton, "Newton's Telecom Dictionary", ISBN # 1-57820-069-5, Malt Kelsey published, page 17.

Harry Newton, "Newton's Telecom Dictionary", ISBN # 1-57820-069-5, Malt Kelsey published, page 523.

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Contact Information

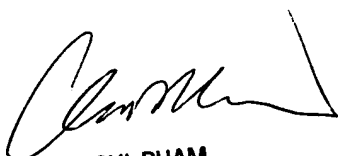
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung X. Nguyen whose telephone number is (703) 305-4892. The examiner can normally be reached on Monday through Friday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Chi Pham can be reached on (703) 305-4378. The fax number for this group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

DXN

May 27, 2003


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 6/12/03